

ABSTRACT OF THE DISCLOSURE

A method and apparatus for determining the stability of dispersions and emulsions accelerates the onset of significant particle agglomeration in a sample by stressing the sample by reducing the height of the interparticle potential energy barrier between the particles. This is achieved by adding one or more of three stress factors: changing the pH of the sample to reduce the surface charge on the particles; adding an adsorbing electrolyte so that ions of the appropriate charge are adsorbed onto the surfaces of the particles to reduce the net charge on the particles; and applying a monovalent, divalent, or trivalent salt to partially screen electrostatic repulsions between the charged particles. In a preferred embodiment, the increase in agglomeration is detected with single particle detection, such as SPOS, to generate a PSD from which a figure of merit is derived. Another embodiment detects turbidity or light scattering to generate a value X indicative of the extent of agglomeration.